

REMARKS

The Office Action has been carefully considered. Claims 13-22 were pending in the application.

Claims reciting methods of encapsulating pollutants were elected and the elected species were non-symmetric hyperbranched polymers in powder form. Claims 16, 19 and 22 were withdrawn from consideration. However, with respect to the novelty and obviousness rejections, the Examiner applied Balogh et al for the proposition that Balogh teaches dendrimeric polymers having symmetric chemical structure. Since the Examiner has applied the non-elected species of claim 13, it is respectfully requested that the Examiner also consider claim 16 which is directed toward this same species.

Claim 13 has been amended to incorporate formulas I and II from Figures 1 and 2, respectively, and does not introduce new subject matter. It is believed this clarification of the structure also serves to clarify that the claimed invention has a novel technical feature over the prior art. Thus it is reiterated that the restriction of the claims is improper. It is respectfully requested that all the species be examined or, in the alternative that the withdrawn species be rejoined upon finding allowable claims.

Drawings

The drawings were objected to and the Examiner communicated that the various features recited in claim 13 were not shown in the drawings. Applicant disagrees.

The Detailed Description of the Figures section at page 10, lines 17-32 explains the schematics of Figures 1 and 2, representing a symmetric dendrimeric polymer and a non-symmetric hyperbranched polymer, respectively. The straight lines denote the inorganic or organic linking groups (aromatic or aliphatic or their combination) and the "X" denotes the aliphatic chain or aromatic group, or their combination. Thus, any one of the linking groups denoted by straight lines can appear in any of the locations of the straight lines and any of the aliphatic chain or aromatic group or a combination can occur at any of the "X"s.

35 USC 112, Second Paragraph

Claims 13-15, 17, 18, 20 and 21 were rejected as being indefinite. With respect to the location of the recited groups and features, it is believed that the amendment to claim 13 moots

the rejection since it includes the structural formula to show locations. With respect to definiteness of the term “nanocavities” with respect to cavity size, it is accepted in the art that the term nanocavities relates generally to a range from 1 to 100 nanometers.

35 USC 102

Claims 13-15 were rejected under 35 USC 102 as being anticipated by Balogh et al. Claims 13, 15, 18 and 20 are rejected as anticipated by Chromecek et al.

It is believed that the amendment to claim 13 moots the Examiner’s rejections because it makes clear that Balogh et al and Chromecek et al. describe different molecules that do not have the claimed structure of formulas I or II.

Furthermore, the Examiner relies on Balogh at col. 6, line 65 for a teaching of an aromatic group. However, that teaching relies further on the formula given in col. 6, lines 56-58. That formula is untranslatable because it refers to a symbol “X” that does not appear in the formula. Therefore, it is not possible to make any sense out of the teaching of Balogh that the Examiner relies upon. Balogh is not enabling for that teaching, thus the prior art Balogh fails to anticipate.

Still further, the Examiner relies on Chromecek et al at col. 4, for a teaching of a structure of a non-symmetric hyperbranched polymer. This structure is also nonenabling because it refers to the variables “x” and “y” but does not provide what numbers those two variables represent; it merely discloses that they are in the ratio 80:20. One of skill in the art would nonetheless not be able to discern how to make those polymers without a further definition of the scope of “x” and “y”. Chromecek is not enabling, thus the prior art Chromecek fails to anticipate.

35 USC 103

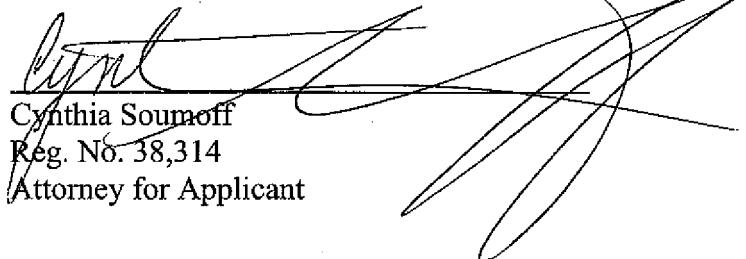
Claim 18 was rejected under 35 USC 103(a) as unpatentable over Balogh et al in view of Chromecek et al. Claim 21 was rejected under 35 USC 103(a) as unpatentable over Balogh et al in view of McCoy et al. or as unpatentable over Chromocek et al. in view of McCoy et al. Claims 13-15, 17 and 20 were rejected under 35 USC 103(a) as unpatentable over Balogh et al in view of Tsiourvas et al and Tomalia et al. Claim 18 was rejected under 35 USC 103(a) as unpatentable over Balogh et al in view of Tsiourvas et al and Tomalia et al as applied to claim 13 and further in view of Chromecek et al. Claim 21 was rejected under 35 USC 103(a) as

unpatentable over Balogh et al in view of Tsiorvas et al and Tomalia et al as applied to claim 13 and further in view of McCoy et al. Applicant traverses all the rejections.

As stated above, the prior art is nonenabling and the amendment to claim 13 makes clear that Balogh et al and Chromecek et al. describe different molecules that do not have the claimed structure of formulas I or II. As such, none of the combinations that the Examiner has applied, which all rely on Balogh or Chromecek as the primary reference, teach the structure of formulas I or II that is claimed in independent claim 13.

In view of the foregoing, Applicants submit that all pending claims are in condition for allowance and request that all claims be allowed. The Examiner is invited to contact the undersigned should he believe that this would expedite prosecution of this application. The Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 13-2165.

Respectfully submitted,


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